

Name: _____

TESTING THE EFFECTIVENESS OF ANTIBIOTIC SOAPS AND ANTIBIOTICS

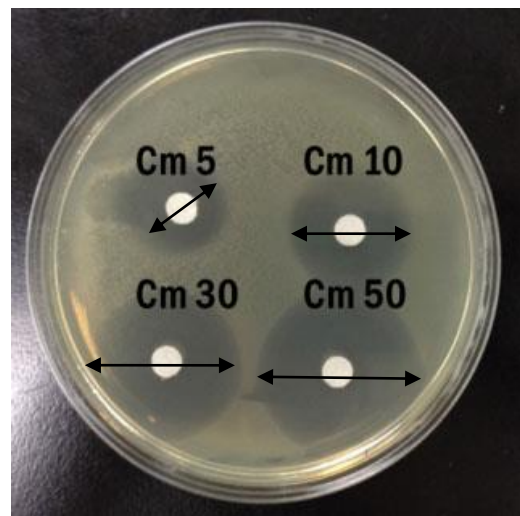
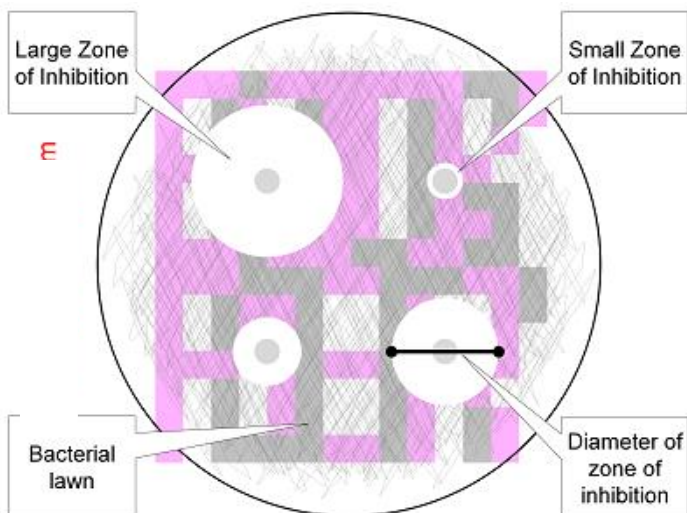
Purpose: To determine which soaps/antibiotics are most effective at preventing the growth of bacteria.

Materials:

petri dish with agar	filter paper
Soaps, skin creams & antibiotics	ruler (mm)
paper punch	forceps
graduated cylinder	incubator (set @ 37 deg C)
candle	small Erlenmeyer flask
Q-tip	

Method:

1. Using a felt marker, divide the bottom of the petri dish into four sections and number them 1 through 4.
2. Remove a Q-tip from the box and swab gently over your forehead.
3. Carefully remove the upper lid of the petri dish and streak the entire surface of the agar with the swab. Replace the lid immediately.
4. Punch out 3 disks of filter paper and soak each in a different soap solution (the solutions that you have brought from home) for 2 minutes.
5. Flame the forceps over the candle for 20 seconds. Allow the forceps to cool and then remove one of the disks from the soap solutions.
6. Place the disk on the culture plate in the middle of the area labeled number 1.
7. Follow the same procedure for the second and third disk. Remember to flame the forceps before removing the disks from the soap solutions.
8. Place the commercially prepared antibiotic discs in the remaining area.
9. Place the petri dish upside down in the incubator at 37°C for 48 hours.
10. Measure the diameter of the zone of inhibition around each disk, and record the measurements in a data table.



Observations:

Solution	Measurement
Antibacterial Soap	5 cm
Antibacterial cream	10 cm
Penicillin	30cm
Tetracycline	50 cm

Questions:

1. On the basis of your experimental results, indicate which substance is most effective at killing bacteria isolated from forehead. Explain how you made your decision.
2. Would the anti-bacterial agent that best controlled the growth of your skin bacteria necessarily be the most effective for all the student groups in your class? How would you go about testing your hypothesis?
3. Redesign your experiment to test mouthwashes. Do not rewrite the lab- just note the one major change you would need to make.
4. Discuss the sources of error in your experiment.

Title:

Title of Lab in one line

Introduction:

Your introduction should include the following:

- Describe the lab
- Explains the term antibiotics
- Explains the term resistance
- Explains the term inhibition

Note: You need to answer the above and arrange them appropriately to make paragraphs that flow and make sense. Don't just answer them in the order provided.

Purpose:

- purpose using your own words

Hypothesis:

- prediction of the outcome of the lab using an if.....then.....statement

e.g. If hydrochloric acid is added to an aqueous solution of sulphur dioxide, then gas will be produced from a single displacement reaction.

Materials:

- Refer to handout entitled "*TESTING THE EFFECTIVENESS OF ANTIBIOTIC SOAPS AND ANTIBIOTICS*" or list in point form.

Procedures:

- Refer to handout entitled "*TESTING THE EFFECTIVENESS OF ANTIBIOTIC SOAPS AND ANTIBIOTICS*" or written in the past tense (3rd person) with numerical steps.

Observations:

- Refer to handout entitled "*TESTING THE EFFECTIVENESS OF ANTIBIOTIC SOAPS AND ANTIBIOTICS*".

Discussion:

- answer any lab questions (if applicable) with complete sentences
- calculations: for numerical data, as presented in class (if applicable)
- answer 3 key questions: 1) Indicate whether hypothesis was correct or not, and explain
2) identify sources of error
3) provide suggestions for improvements

Conclusion:

- Write one or two sentences summarizing your finding